

WHAT IS CLAIMED IS:

1. An elevator system comprising:  
a drive motor mounted at a head of an elevator shaft and having a drive pulley;  
5 an elevator car movable in the elevator shaft in a cantilever mode along guide rails positioned at one side of said elevator car;  
a counterweight movable in the elevator shaft and arranged laterally of said elevator car; and  
a flat-belt-like support means supporting said elevator car and engaging said drive  
10 pulley, said support means being a wedge-ribbed belt having a running surface facing said drive pulley and a plurality of ribs and grooves formed in said running surface and extending in parallel in a longitudinal direction of said support means.
- 15 2. The elevator system according to claim 1 wherein said ribs and grooves are one of substantially triangular-shaped and trapezium-shaped in cross section.
3. The elevator system according to claim 2 wherein said ribs and grooves are formed with lateral flanks at an angle in a range of 80° to 100°.
- 20 4. The elevator system according to claim 3 wherein said angle is 90°.
5. The elevator system according to claim 1 wherein said wedge-ribbed belt has a plurality of transverse grooves formed in said running surface.
- 25 6. The elevator system according to claim 1 wherein said support means includes at least two wedge-ribbed belt strands arranged in parallel.
7. The elevator system according to claim 1 wherein said drive pulley has an  
30 external diameter in a range of 70 millimeters to 100 millimeters.

8. The elevator system according to claim 1 including a pair of vertical guide columns mounted in the elevator shaft at said one side of said elevator car, each said guide column having one of said car guide rails and a counterweight guide rail formed thereon, and wherein said drive motor together with said drive pulley are mounted on a  
5 drive bracket attached to at least one of said guide columns.

9. The elevator system according to claim 1 wherein said drive motor and said drive pulley are mounted in a space which lies between said one side of said elevator car, when said elevator car is standing in an uppermost position in the elevator shaft, and an  
10 adjacent wall of the elevator shaft and an axis of said drive pulley is arranged horizontally and parallel to said one side of said elevator car.

10. The elevator system according to claim 1 wherein said wedge-ribbed belt is connected at one end at said one side of said elevator car at a first support means fixing  
15 point, extends from said first support means fixing point vertically upwards to a side, which faces said elevator car, of a periphery of said drive pulley, loops around said drive pulley by 180° and then runs vertically downwards to a second support means fixing point at said counterweight.

20 11. The elevator system according to claim 1 including a belt transmission means coupling said drive motor to said drive pulley.

12. The elevator system according to claim 11 wherein said belt transmission means includes at least one of a cogged belt and a wedge-ribbed belt coupling said drive  
25 motor to said drive pulley.

13. An elevator car support for use in an elevator system having a drive motor mounted at a head of an elevator shaft and having a drive pulley for engaging the support, the support comprising: a wedge-ribbed belt adapted to support the elevator car  
30 in a cantilever mode and engaging the drive pulley, said belt having a running surface adapted to face the drive pulley and a plurality of ribs and grooves formed in said running surface and extending in parallel in a longitudinal direction of said belt.

14. The elevator car support according to claim 13 wherein said ribs and grooves are one of substantially triangular-shaped and trapezium-shaped in cross section.